

---

## SIMPSON COUNTY

### (Simpson County Water Service Area Map)

- Estimated 1999 population of 16,300--95% on public water
- Estimated 2020 population of 17,700--97% on public water
- 405 miles of water lines, with plans for 36 additional miles
- Estimated funding needs for public water 2000-2005--\$18,472,000
- Estimated funding needs for public water 2006-2020--\$10,322,000

Simpson County had an estimated population of 16,294 (6,532 households) in 1999 with a projected population of 17,734 (7,598 households) in 2020. The Simpson County Water District and Franklin Water Works provided service to 6,050 households or 95 percent of the county. 80% of those not on public water rely on private wells. About 130 new households will be placed on public water through line extensions in 2000-2020.

Simpson County has 6,706 service connections and 4,000,000 gallons per day treatment capacity. Total storage capacity is 6,650,000 gallons. The Countywide average costs for the first 5,000 gallons are \$24.81 for the system that reported and operating and management costs per service connection are \$130.

#### *Estimated Costs - Proposed Projects, 2000-2005*

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
SIMPSON								
CITY OF FRANKLIN				1,025	6,000		10,975	18,000
SIMPSON COUNTY W/D	13.5	16	472					472
SIMPSON COUNTY TOTAL	13.5	16	472	1,025	6,000		10,975	18,472

#### *Estimated Costs - Proposed Projects, 2006-2020*

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
SIMPSON								
CITY OF FRANKLIN	9.1			7,150		550	2,000	9,700
SIMPSON COUNTY W/D	12.6		365				257	622
SIMPSON COUNTY TOTAL	21.7		365	7,150		550	2,257	10,322

---

# WATER SERVICE AREAS

## SIMPSON COUNTY

### Kentucky

*Prepared By:*  
**Water Resource Development Commission**

Department for Local Government  
1024 Capital Center Drive, Suite 340  
Frankfort, Kentucky 40601-8204  
502-573-2382 -- 502-573-2939 fax  
<http://dlgnt1.state.ky.us/wrdc/>

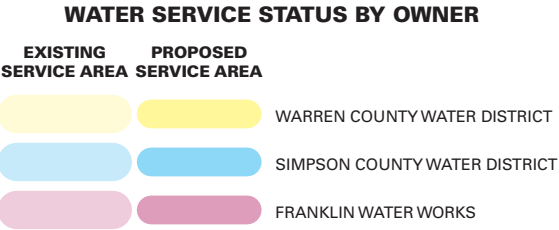
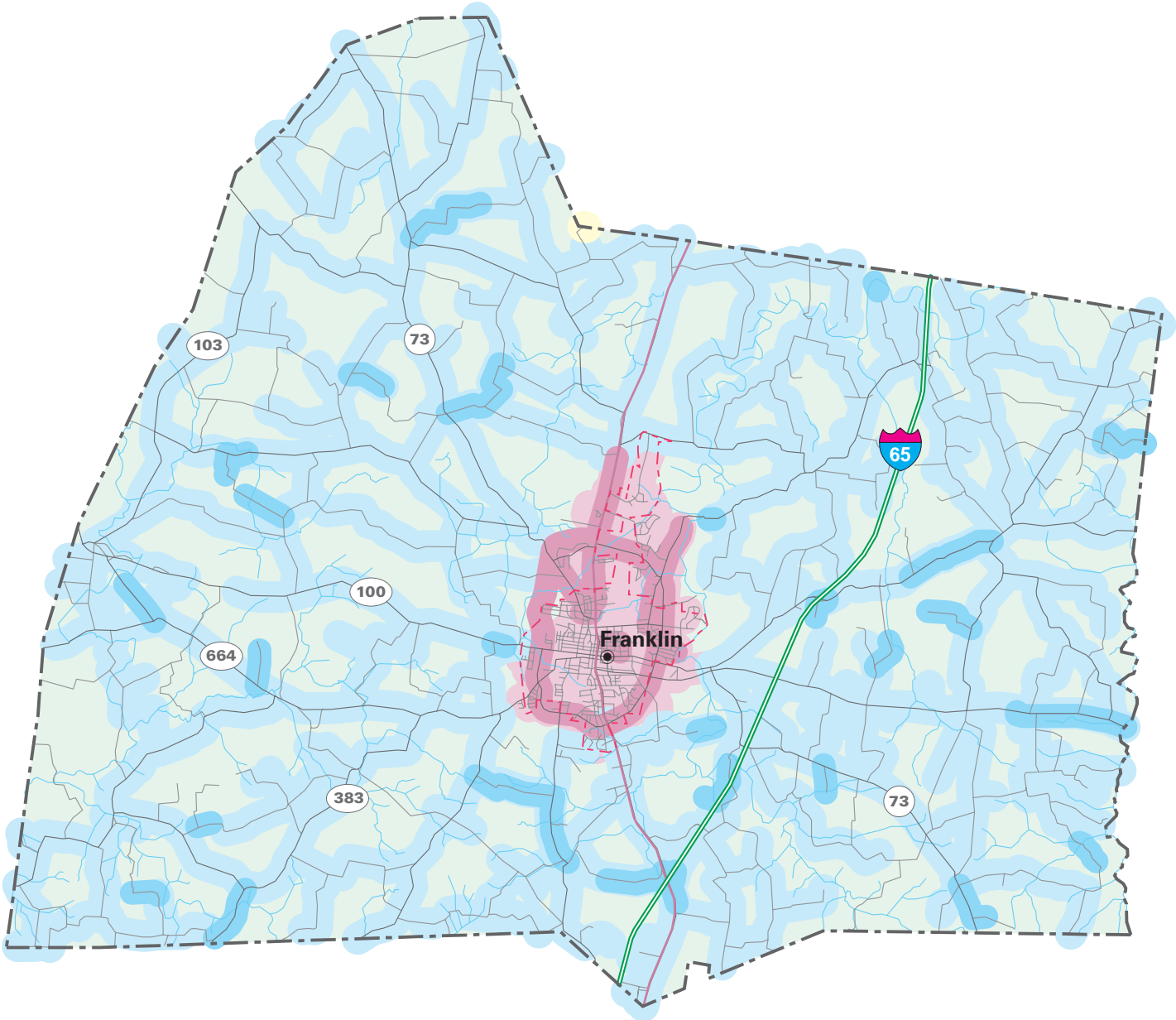
Bob Arnold, Chairman  
Lawrence Wetherby, Executive Director

Final GIS & Cartographic Operations By:  
Kent Anness & Kim Prough

Data Collection & GIS Input By:  
Kentucky Area Development Districts



LIMITATION OF LIABILITY: The Water Resource Development Commission has no reason to believe that there are any inaccuracies or defects in information incorporated in this work and make no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor any such warranties to be implied, with respect to the information or data furnished herein.



---

## PUBLIC WATER SYSTEMS

The residents of Simpson County are presently provided water by two systems: the Simpson County Water District and Franklin Water Works.

### **SIMPSON COUNTY WATER DISTRICT**

PWSID: ..... 1070398  
System Type:..... COMMUNITY  
Owner Type: ..... WATER DISTRICT  
Surface Source:  
Purchase Source: ..... STATE-LINE  
Well Source:  
Sells Water to:  
Treatment Plant Capacity (MGD):..... 0.00  
Percent Daily Average Production:..... 0.00  
Total Tank Storage Capacity (gallons): ..... 1,650,000.00  
Total Service Connections: ..... 2,506.00  
Number of Employees:..... 2.00  
Treatment Operator Class: ..... 2D  
Distribution Operator Class:  
Customer Rate for 1,000 Gallons:..... 4.25  
O/M costs 1997: ..... 599,830.61  
O/M costs per Service Connection: ..... 232.31  
Net Revenue 1997: ..... 376,332.95  
Total Water Produced 1997 (gallons):..... 0.00  
Water Sold 1997 (gallons): ..... 236,091,034.00  
Unaccounted-for Water 1997 (%): ..... 10.57

Simpson County Water District gets its water from White House Utility District, and as described in the Simpson County Water Supply Plan, is an adequate supply of raw water for future needs. The District currently serves 2,506 households in Simpson County. The District can purchase about 3,312,000 gallons of water per day. The District's storage system consists of 6 tanks with a combined capacity of 1,650,000 gallons. The calculated charge for 5,000 gallons of treated water (residential use) is currently \$21.25. Simpson County Water District has two employees: one certified to operate the distribution system and one for billing and financial concerns.

The need for water service expansion in the Simpson County Water District results from rapid growth in Simpson County and aging infrastructure. Population studies indicate that Simpson County will continue to grow at a steady rate in the coming years. Currently, there are some households in Simpson County not served by the District. In order to serve these

---

---

households, the district's distribution system will require upgrades to increase and maintain an adequate flow and pressure.

**FRANKLIN WATER WORKS**

PWSID: ..... 1070144  
System Type: ..... COMMUNITY  
Owner Type: ..... MUNICIPAL  
Surface Source: ..... DRAKE'S CREEK  
Purchase Source:  
Well Source:  
Sells Water to:  
Treatment Plant Capacity (MGD): ..... 5.00  
Percent Daily Average Production: ..... 37.00  
Total Tank Storage Capacity (gallons): ..... 3,750,000.00  
Total Service Connections: ..... 4,200.00  
Number of Employees: ..... 11.00  
Treatment Operator Class: ..... 2D  
Distribution Operator Class: ..... 4A  
Customer Rate for 1,000 Gallons: ..... 2.88  
O/M costs 1997: ..... Not available  
O/M costs per Service Connection: ..... Not available  
Net Revenue 1997: ..... Not available  
Total Water Produced 1997 (gallons): ..... Not available  
Water Sold 1997 (gallons): ..... Not available  
Unaccounted-for Water 1997 (%): ..... Not available

Franklin Water Works gets its water from Drake's Creek, which as the Simpson County Water Supply Plan notes, is adequate raw water for future needs. The District currently serves 3,540 households in Franklin. The Drakes Creek water treatment plant has a production capacity of 5 million gallons per day. On an average day the plant produces approximately 1.6 million gallons of potable water. Franklin Water Works storage system consists of three tanks and a clear-well. The total storage capacity of Franklin Water Works is 3,750,000 gallons. The calculated charge for 5,000 gallons of treated water (residential use) is currently \$14.40. Franklin Water Works has 11 employees: four certified as water treatment plant operators; two certified as distribution system operators; and two for billing and financial concerns.

The need for water service expansion in the Franklin Water Works results from an aging infrastructure and low pressure. Parts of the existing infrastructure are more than 60 years old. Population studies indicate that Franklin will continue to grow at a steady rate. Many households in Franklin are not adequately served because of leaking lines and low pressure.

---

---

To serve these households, the Water Works distribution system will require upgrades to increase and maintain an adequate flow and pressure.

### **PRIVATE DOMESTIC SYSTEMS**

About 800 people in Simpson County rely on private domestic water supplies: 620 on wells and 180 on other sources.

In the limestone rich area of Simpson County more than three-quarters of the drilled wells in the uplands are adequate for a domestic supply. Yields as high as 50 gpm have been reported from wells penetrating large solution channels. In the low-lying areas in the Red River, Drakes Creek, Lick Creek, and Sulphur Fork valleys, most wells are inadequate for domestic use unless the well intercepts a major solution opening in the limestone in which the yield could be very large.

Springs with flows ranging from a few gallons per minute too 2930 gpm are found in the county. Minimum flow generally occurs in early fall, maximum flows in late winter.

---